

WHAT IS CLAIMED IS:

- 1           1.     A nanomaterial composition of matter comprising  
2                    zinc; and  
3                    at least one metal other than zinc  
4                    wherein the composition of matter has an electrical conductivity  
5           greater than 0.0001 mhos.cm.
- 6           2.     The nanomaterial composition of matter of claim 1, wherein the  
7           composition comprises aluminum.
- 8           3.     The nanomaterial composition of matter of claim 1, wherein the  
9           electrical conductivity is greater than 0.01 mhos.cm.
- 10          4.     The nanomaterial composition of matter of claim 1, wherein the  
11          nanomaterial comprises particles with an aspect ratio greater than 1.
- 12          5.     The nanomaterial composition of matter of claim 1, wherein the  
13          nanomaterial comprises non-spherical particles.
- 14          6.     A coating comprising the nanomaterial composition of matter of claim  
15          1.
- 16          7.     A transparent conductive layer comprising the nanomaterial  
17          composition of matter of claim 1.
- 18          8.     An electrode comprising the nanomaterial composition of matter of  
19          claim 1.
- 20          9.     A product comprising the nanomaterial composition of matter of claim  
21          1.
- 22          10.    A device comprising the nanomaterial composition of matter of claim  
23          1.

- 24           11.     A method for preparing a composition of matter comprising  
25                     providing nanoparticles of a first composition comprising zinc; and  
26                     reacting the nanoparticles with a reagent  
27                     wherein the reacting creates a second composition that is different  
28     from the first composition.
- 29           12.     The method of claim 11, wherein the first composition comprises  
30     particles with an aspect ratio greater than 1.
- 31           13.     The method of claim 11, wherein the first composition further  
32     comprises oxygen.
- 33           14.     The method of claim 11, wherein the reagent comprises nitrogen.
- 34           15.     The method of claim 11, wherein the reagent comprises a halogen.
- 35           16.     The method of claim 11, wherein the reagent comprises an acid or an  
36     alkali.
- 37           17.     The method of claim 11, wherein the reagent comprises hydrogen.
- 38           18.     The method of claim 11, wherein the reagent comprises oxygen.
- 39           19.     The method of claim 11, wherein the reagent comprises carbon.
- 40           20.     A product comprising the composition of matter prepared using the  
41     method of claim 11.